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10/600,137	06/20/2003	Ka Shun Kevin Fung	2702P	5587
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SAWYER LAW GROUP LLP			VYAS, ABHISHEK	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

Application No.

10/600,137

Applicant(s)

KEVIN FUNG, KA SHUN

Examiner

ABHISHEK VYAS

Art Unit

3691

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/20/2003 and 06/25/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

**Status of Claims**

1. This action is in reply to the application 10/600,137 filed on 20 June 2003.
2. Claims 1-57 are currently pending and have been examined.
3. Claims 1-57 are rejected.

**Information Disclosure Statement**

4. The Information Disclosure Statements filed on 20 June 2003 and 25 June 2004 have been considered. An initialed copy of the Form 1449 is enclosed herewith.

***Double Patenting***

5. Claims 1-39, 40-46 and 47-57 of this application (10/600,137) conflict with claims 1-42, 43-50, 51-55 of Application No. 10/601,173 and claims 1-38, 39-43 and 44-57 of Application No. 10/600,026. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.
6. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process .... may obtain a patent therefore..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

7. A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.
8. Claims 1-39, 40-46 and 47-57 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-42, 43-50, 51-55 of Application No. 10/601,173 and claims 1-38, 39-43 and 44-57 of Application No. 10/600,026. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 112***

9. **Claims 1, 40, 45 and 47** are rejected under 35 U.S.C. § 112, first paragraph, as being of undue breadth. Claims 2, 44 and 51 recite a single means of "*providing a complete set*". There are no other steps in the independent claim.

A "single means" claim, i.e. where a means recitation does not appear in combination with another recited element or means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. See *In re Hyatt*, 218 USPQ 195, (CAFC 1983) and MPEP 2164.08(a).

**2164.08(a) Single Means Claim**

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 218 USPQ 195 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor. Although the court in Fiers v. Sugano, 984 F.2d 164, 25 USPQ2d 1601 (Fed. Cir. 1993) did not decide the enablement issue, it did suggest that a claim directed to all DNAs that code for a specified polypeptide is analogous to a single means claim.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claims 1, 40, 45, 47 and 56** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The preamble in the claim recites a "*method for improving liquidity of transactions for a plurality of contracts*". It is unclear how the claims sets forth to accomplish this goal. Claim 1, 43 and 44 simply recites "*defining a complete set*". The claim fails to establish how liquidity is improved. The step of "defining" is vague. It is unclear as to what definition is being assigned to the set.
12. The term "complete set" in **claim 1, 40, 45, 47 and 56** is a relative term which renders the claim indefinite. The term "complete set" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.
13. **As per claim 2, 41 and 48**, the phrase "a time between the at least one particular time" is vague and indefinite. The extent of time referred to is vague. For a time period to be between a time and

one particular time, a beginning and an end time has to be established. For the purpose of examination the phrase will be interpreted to be any time.

14. **As per claim 2, 41 and 48**, the phrase "if necessary" makes the claim vague and indefinite. The phrase makes the scope of the condition vague and indefinite. It is unclear under what condition(s) will the interest rate effect be necessary.
15. Claims 2-39, 41-44, 46, 48-55 and 57 are rejected on their dependencies to claims 1, 40, 45, 47 and 56

***Claim Rejections - 35 USC § 101***

16. **35 U.S.C. 101 reads as follows:**

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

17. Claims 1 is rejected under 35 U.S.C. 101 because they lack a real world tangible result. Claim 1 fails to embody a tangible result. The claimed invention as a whole does not accomplish a practical result. That is, it must produce a "useful, concrete and tangible result." See *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention. The mere fact that the claim is just "*providing a complete set*" does not satisfy the requirement of 35 U.S.C. 101. The claim may be interpreted in an alternative as involving no more than a manipulation of an abstract idea and therefore is non-statutory under 35 U.S.C. § 101. The claim recites does not embody a real world output or result. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.
18. Claims 2-39 are rejected on their dependency to claims 1.

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3691

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. **Claims 1, 40, 45, 47, and 56** are rejected under 35 U.S.C. 103 (a) as being unpatentable over Roberts et al (herein after Roberts) United States Patent No.: 4,739,478 (Date of Patent: April 19, 1988) in view of Lancaster United States Patent No. : 6,876,982 B1

21. **As per claims 1, 43, 44 and 55**, Roberts discloses the following limitations:

- the complete set corresponding to a settlement value (see at least Roberts column 3, lines 9-14).
- the settlement value being determined based upon the initial settlement value (see at least Roberts column 1, lines 23-31).

Roberts, does not disclose the following limitations. Lancaster, however, teaches the limitations as follows:

- defining a complete set including the plurality of contracts (see at least Lancaster column 3, lines 15-22).
- the complete set guaranteeing at least an initial settlement value at least one particular time (see at least Lancaster column 3, lines 64-67; column 4, line 1).
- allowing at least one market participant to lock in a trade for a portion of the plurality of contracts, the portion of the plurality of contracts including multiple contracts (see at least Lancaster column 4, line 44-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Roberts to specifically include a set of contracts having a specific price calculated or based on a price, quantity and/or value. One would be motivated to do so to get correct information on maturity dates and values before investing into the instrument and creating value (see at least Roberts column 2, lines 46-54).

22. **As per claim 2, 41 and 48**, Roberts discloses the following limitations:

- the initial settlement value and an interest rate effect, if necessary, wherein the interest rate effect includes an adjustment in a present value based upon an interest rate, the initial settlement value, and a time between the at least one particular time and the settlement value being determined (see at least Roberts column 1, lines 26-31; column 2, lines 1-4; column 4, lines 59-67).

23. As per claims 3, 42, 49, Roberts discloses the limitation as follows:

- each of the plurality of contracts matures upon at least one particular event occurring (see at least Roberts column 1, lines 44-59).
- wherein the complete set corresponds to at least the settlement value regardless of whether the at least one particular event occurs for any of the plurality of contracts (see at least Roberts column 2, lines 38-42; column 10, lines 25-37).

A contract can mature upon the occurrence of its maturity date. Secured bonds guarantee payments.

24. Claims 1, 40, 45, 47, and 56 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Roberts et al (herein after Roberts) United States Patent No.: 4,739,478 (Date of Patent: April 19, 1988) in view of Lancaster United States Patent No. : 6,876,982 B1

25. As per claim 4, Roberts discloses a bond trading system. Roger does not disclose the following limitations. Asher, however, teaches the following:

- converting the first plurality of contracts to the second plurality of contracts (see at least Asher column 4, lines 10-15).

It would have been obvious to one of ordinary skill in the art to expand the system of Roberts to include wagering systems in the field of financial derivatives trading. One would be motivated to do so to exchange and settle their financial instruments (see at least Asher column 1, lines 22-26).

26. As per claim 5-19, Roberts discloses a bond trading system. Roger does not disclose the following limitations. Asher, however, teaches the following:



- determining a PM payoff ratio (PMPR) for each of the first plurality of contracts; and determining a first quantity and first price of each of the second plurality of contracts corresponding to one of the first plurality of contracts utilizing the PMPR ratio for each of the first plurality of contracts, a notional for each of the first plurality of contracts and a held quantity for each of a plurality of market participants holding a portion of the first plurality of contracts (see at least Asher column 15, lines 25-30; column 16, lines 9-18).
- iteratively determining the first plurality of contracts for the PM pool or auction. forming an initial PM pool using a plurality of orders, a portion of the plurality of orders having a plurality of price limits; determining a PMPR ratio and thus Implied Contract Price for each of the first plurality of contracts (see at least Asher column 15, lines 25-30; column 16, lines 9-18; column 18, lines 29-45).
- comparing the plurality of price limits against the implied contract price for a portion of the first plurality of contracts corresponding to the portion of the plurality of orders, thereby producing a plurality of price differentials (see at least Asher column 28, lines 28-48; column 16, lines 9-18).
- at least partially removing an order of the plurality of orders from the initial PM pool having a largest price differential of the plurality of price differentials (see at least Asher column 15, lines 59-65; column 16, lines 9-18).

It would have been obvious to one of ordinary skill in the art to expand the system of Roberts to include wagering systems in the field of financial derivatives trading. One would be motivated to do so to exchange and settle their financial instruments (see at least Asher column 1, lines 22-26).

27. **Claims 20-37** are rejected under 35 U.S.C. 103 (a) as being unpatentable over Roberts et al (herein after Roberts) United States Patent No.: 4,739,478 (Date of Patent: April 19, 1988) in view of Lancaster United States Patent No. : 6,876,982 B1 as applied to claim 1 above and Altomare

et al (herein after Altomare) United States Patent No. : 7,249,075 B1 in view of Maples et al United States Patent No. : 6,381,585 B1.

28. **As per claim 20 and 25**, Roberts discloses a data processing system to trade and exchange bonds as taught above. Roberts does not disclose the following limitation. Altomare, however discloses the limitation as follows:

- providing a special purpose vehicle for buying and selling at least one of the plurality of contracts (see at least Altomare column 2, lines 4-12; column 7, lines 11-16).
- the special purpose vehicle is allowed to secure trades when buying and/or selling at least one of the plurality of contracts (see at least Altomare column 9, lines 29-46).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Roberts to specifically provide a special purpose entity to reduce exposure to risk. One would be motivated to do so to get higher returns, pay lower taxes and distribute higher dividends (see at least Altomare column 1, lines 65-67; column 2, lines 5-7).

29. **As per claim 21-23 and 28** , Roberts discloses a data processing system to trade and exchange bonds. Roberts does not disclose the following limitation. Maples, however discloses the limitation as follows:

Maples however, disclose the teachings as follows:

- allowing the special purpose vehicle to assemble the complete set by buying at least the portion of the complete set based upon a sum of offers and the settlement value (see at least Maples column 3, lines 35-53).
- automatically buying the at least the portion of the complete set to assemble the complete set when a sum of offers for the complete set is less than or equal to the settlement value (see at least Maples column 3, lines 33-50).
- allowing the special purpose vehicle to sell the at least the portion of the complete set based upon a sum of bids and the settlement value (see at least Maples column 3, lines 33-50).

- generating a zero price bid to provide the at least one bid (see at least Maples column 4, lines 18-22, column 7, lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Roberts to specifically enable a special purpose entity to trade, buy or sell bonds or options or contracts. One would be motivated to do so to get higher returns, pay lower taxes and hedge against risk (see at least Altamore column 4, lines 24-29).

30. **As per claim 26, 27, and 29-31**, Roberts discloses a data processing system to trade and exchange bonds. Roberts does not disclose the following limitation. Lancaster, however discloses the limitation as follows:

- generating a conditional order to sell a remaining portion of the complete set, the conditional order to sell being based upon the at least one bid, the conditional order having a corresponding condition, the corresponding condition being the at least one bid and the conditional order to sell both being accepted, the special purpose vehicle making at least one trade of the remaining portion of the complete set when the condition is fulfilled (see at least Lancaster column 8, lines 36-45, lines 64-67).
- wherein a sum of the at least one bid and a total of at least one price for each of the remaining contracts is less than or equal to the settlement value (see at least Lancaster (see at least Lancaster column 14, lines 58-67).
- at least one price for each of the remaining contracts is greater than or equal to the settlement value (see at least Lancaster column 14, lines 58-67).
- the special purpose vehicle providing step is provided using a computer system (see at least Lancaster column 1, lines 41-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Roberts to fulfill an exchange contracts in the absence of a market. One would be motivated to do so to hedge against risk and loss or purchase a contract at a low cost in

expectations of the market to arrive and allow for a high sale price (see at least Lancaster column 16, lines 25-42 and column 9, lines 1-5).

31. **Claims 32-40**, are rejected under 35 U.S.C. 103 (a) as being unpatentable over Roberts et al (herein after Roberts) United States Patent No.: 4,739,478 (Date of Patent: April 19, 1988) in view of Lancaster United States Patent No. : 6,876,982 B1 as applied to claim 1 above and Lange United States Patent No.: 6,321,212 B1.

32. **As per claims 32-35**, Roberts discloses a data processing system to trade and exchange bonds. Roberts does not disclose the following limitation. Lange, however, teaches the limitations below.

- determining a credit risk for each of the plurality of market participants based upon the settlement value and a selling price for each of the plurality of contracts (see at least Lange column 3, lines 54-61; column 11, lines 24-30; column 14, lines 7-10).
- a portion of the plurality of market participants are short selling a first portion of the plurality of contracts determining the credit risk for each of the portion of the plurality of market participants based upon the selling price of each of the first portion of the plurality of contracts and a winning payout for the contract. (see at least Lange column 19, lines 40-53; column 65, lines 10-21).
- the credit risk is the winning payout minus the selling price (see at least Lange column 7, lines 10-19; column 11, lines 7-16).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Roberts to specifically determine credit risk. One would be motivated to do so to get highest possible returns, for a particular maturity date and hedge against risk (see at least Lange column 39, lines 39-42).

33. **Claims 35-39**, are rejected under 35 U.S.C. 103 (a) as being unpatentable over Roberts et al (herein after Roberts) United States Patent No.: 4,739,478 (Date of Patent: April 19, 1988) in view of Lancaster United States Patent No. : 6,876,982 B1 as applied to claim 1 above and Lange

United States Patent No.: 6,321,212 B1 further in view of Philip et al United States Patent No.: 7,181,422 B1.

34. **As per claims 35-39**, Roberts discloses a data processing system to trade and exchange bonds.

Roberts does not disclose the following limitation. Lange, however, teaches the limitations below

- an exchange acts as a custodian for a short margin for each of the plurality of market participants, the short margin being based upon the credit risk (see at least Lange column 3, lines 50-61; figure 9c and related text).
- a bank acts as a custodian for a short margin for each of the plurality of market participants, the short margin being based upon the credit risk (see at least Lange column 10, lines 25-33).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Roberts to specifically determine credit risk. One would be motivated to do so to get highest possible returns, for a particular maturity date and hedge against risk (see at least Lange column 39, lines 39-42).

Lange does not specifically teach the following limitation. Philip et al however, teach the following:

- the special purpose vehicle acts as a custodian for a short margin for each of the plurality of market participants, the short margin being based upon the credit risk (see at least Philip column 4, lines 49-58).
- the special purpose vehicle places the short margin in an interest bearing account (see at least Philip column 4, lines 49-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Roberts and Lange to specifically create a holding entity. One would be motivated to do so to allow the exchange to process trade orders without running out of funds and for the ability for counterparties to obtain credit or securitization information (see at least Philip column 6, lines 60-63).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abhishek Vyas whose telephone number is 571-270-1836. The examiner can normally be reached on 7:30am-5:00pm EST Mon-Thur, ALT Friday OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on 571-272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the Status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abhishek Vyas

Patent Examiner

01 February 2008

AV



HANI M. KAZIMI  
PRIMARY EXAMINER